

REMARKS

The Examiner is thanked for the thorough examination of the present application and the allowance of claims 3, 4, 7, 8, 11, 12, 15, and 16. The Office Action, however, tentatively rejected all remaining claims 1, 2, 5, 6, 9, 10, 13, and 14. Specifically, the Office Action rejected claims 1, 2, 5, 6, 9, 10, 13 and 14 under 35 U.S.C. 103(a) as allegedly unpatentable over Libsch et al. (US 2003/0107565 A1) in view of Nathan et al. (US 2006/0027807 A1). Applicant respectfully requests reconsideration of the rejections for at least the reasons discussed below.

Focusing on the independent claims 1, 5, 9, and 13, among other distinguishing features, each of these claims expressly recites the following distinguishing limitation: “wherein the second transistor is an amorphous silicon thin film transistor (a-Si TFT), and an equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.”

The Examiner has admitted that Libsch fails to teach that the second transistor is an amorphous silicon thin film transistor (a-Si TFT) having an equivalent channel width/length (W/L) ratio thereof exceeding 10, and instead has applied Nathan as allegedly teaching this feature (Office Action, p. 3). Although Nathan mentions that the size of the drive transistor can be scaled up yet meeting the requirements on pixel area, the reference does not identify that **the equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.**

In this regard, the Office Action cites paragraph 38 for this teaching. However, this cited portion of Nathan only states:

[0038] The pixel architectures are compatible to surface (top) emissive AMOLED displays that enables high on-pixel TFT integration density for uniformity in OLED drive current and high aperture ratio. A 5-T driver circuit has been described that provides on-pixel gain, high linearity

(about.30 dB), and high dynamic range (about.40 dB) at low supply voltages (15-20V) compared to the similar designs (27V). The results described here illustrate the feasibility of using a-Si:H for 3-inch mobile monochrome display applications on both glass and plastic substrates. With the latter, although the mobility of the TFT is lower, the size of the drive transistor can be scaled up yet meeting the requirements on pixel area as depicted in FIG. 1.

Further, the Office Action tacitly admits that Nathan fails to teach the specific claimed width/length ratio by stating that “paragraph 38, teaches the W/L can be scaled to any value as the overall structure achieves high density pixel integration...”

The significance and benefit of this feature is disclosed in page 6, lines 16-22 of the present application. In Fig. 4, when the equivalent channel width/length (W/L) ratio equals 10, the a-Si TFT outputs a 6.13 μ A current by inputting only 7 volt input voltage. As to current leakage, performance of the a-Si TFT is superior to an LTPS TFT. Thus, the a-Si TFT can be applied in an OLED display by **raising the W/L above 10**. That is, when equivalent channel width/length (W/L) ratio of the transistor exceeds 10, performance of the a-Si TFT is superior to an LTPS TFT.

Significantly, neither Libsch nor Nathan recognizes nor discloses this feature. Therefore, even if properly combined, the resulting combination fails to teach all claimed features, and for at least this reason the rejection should be withdrawn.

For at least the reasons described above, Applicant believes that the Examiner did not establish *prima facie* evidence against these claims because Libsch and Nathan fail to teach or suggest all the limitations of independent claims 1, 5, 9, and 13. Applicant respectfully requests that the rejection of these claims be withdrawn and the claims passed to issue.

As a separate and independent basis for the patentability of claims 1, 5, 9, and 13, Applicant submits that the combination of Nathan and Libsch is improper. In this regard, the Office Action combined Nathan with Libsch to reject claims 1, 5, 9, and 13 on the solely expressed basis that the combination would “be able to have an OLED display with amorphous silicon transistors driver circuit IC with significant saving in capital equipment and lower[] overall cost.” (Office Action, p. 4). This rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

Office policy has consistently been to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquires enunciated therein as a background for determining obviousness are briefly as follows:

- (A) Determining of the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Simply stated, the Office Action has failed to at least (1) ascertain the differences between and prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the two references (i.e., lower overall cost) embodies clear and improper hindsight rationale, as well as subjective speculation (as no evidence was provided by the Examiner as to why the overall cost would be lower). For at least these additional reasons, Applicant submits that the rejections of independent claims 1, 5, 9, and 13 are improper and should be withdrawn.

Insofar as claims 2, 6, 10, and 14 depend on claims 1, 5, 9, 13 respectively and therefore incorporate all of the limitations of claims 1, 5, 9, or 13, these claims are also in condition for allowance.

Withdrawal of the rejections and allowance of the claims are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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